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KPV is known as antimicrobial  
Resistor  
ABPH18000PCT

10/023,287  
FD (PD) = 10/023,287

Having described the invention, what is claimed is:

- I-II 1. A method for reducing the viability of microbes comprising exposing the microbes to an antimicrobial agent selected from the group consisting of one or more peptides including the amino acid sequence KPV, one or more peptides including the amino acid sequence MEHFRWG, or a biologically functional equivalent of any of the foregoing.
- I 2. A method according to Claim 1, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence KPV or a biologically functional equivalent of any of the foregoing.
- I 3. A method according to Claim 2, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence KPV.
- \ 4. A method according to Claim 3, wherein the entire amino acid sequence of the antimicrobial agent is KPV.
- \ 5. A method according to Claim 1, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence HFRWGKPV or a biologically functional equivalent of any of the foregoing.
- \ 6. A method according to Claim 4, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence HFRWGKPV.
- \ 7. A method according to Claim 5, wherein the entire amino acid sequence of the antimicrobial agent is HFRWGKPV.

8. A method according to Claim 1, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence SYSMEHFRWGKPV or a biologically functional equivalent of any of the foregoing.

9. A method according to Claim 7, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence SYSMEHFRWGKPV.

10. A method according to Claim 8, wherein the entire amino acid sequence of the antimicrobial agent is SYSMEHFRWGKPV.

11. A method according to Claim 1, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence MEHFRWG or a biologically functional equivalent of any of the foregoing.

12. A method according to Claim 11, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence MEHFRWG.

13. A method according to Claim 11, wherein the entire amino acid sequence of the antimicrobial agent is MEHFRWG.

14. A method according to Claim 1, wherein the antimicrobial agent excludes naturally occurring  $\alpha$ -MSH.

15. A method according to Claim 1, wherein the antimicrobial agent is further selected from the group consisting of one or more peptides having an amino acid chain length of up to thirteen.
16. A method according to Claim 15, wherein the antimicrobial agent is further selected from the group consisting of one or more peptides having an amino acid chain length of up to eight.
17. A method according to Claim 1, wherein the antimicrobial agent is N-acetylated and C-amidated.
18. A method according to Claim 1, wherein the concentration of the antimicrobial agent is at least  $10^{-12}$  molar.
19. A method according to Claim 18, wherein the concentration of the antimicrobial agent is at least  $10^{-6}$  molar.
20. A method according to Claim 1, wherein the microbes include *Staphylococcus aureus* or *Candida albicans*.
21. A method for reducing the germination of yeast comprising exposing the yeast to an antimicrobial agent selected from the group consisting of one or more peptides including the amino acid sequence KPV or a biologically functional equivalent of any of the foregoing.

22. A method according to Claim 21, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence KPV or a biologically functional equivalent of any of the foregoing.

23. A method according to Claim 22, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence KPV.

24. A method according to Claim 23, wherein the entire amino acid sequence of the antimicrobial agent is KPV.

25. A method according to Claim 21, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence HFRWGKPV or a biologically functional equivalent of any of the foregoing.

26. A method according to Claim 25, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence HFRWGKPV.

27. A method according to Claim 26, wherein the entire amino acid sequence of the antimicrobial agent is HFRWGKPV.

28. A method according to Claim 21, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence SYSMEHFRWGKPV or a biologically functional equivalent of any of the foregoing.

29. A method according to Claim 28, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence SYSMEHFRWGKPV.

30. A method according to Claim 29, wherein the entire amino acid sequence of the antimicrobial agent is SYSMEHFRWGKPV.

31. A method according to Claim 21, wherein the antimicrobial agent excludes naturally occurring  $\alpha$ -MSH.

32. A method according to Claim 21, wherein the antimicrobial agent is further selected from the group consisting of one or more peptides having an amino acid chain length of up to thirteen.

33. A method according to Claim 32, wherein the antimicrobial agent is further selected from the group consisting of one or more peptides having an amino acid chain length of up to eight.

34. A method according to Claim 21, wherein the antimicrobial agent is N-acetylated and C-amidated.

35. A method according to Claim 21, wherein the concentration of the antimicrobial agent is at least  $10^{-12}$  molar.

36. A method according to Claim 35, wherein the concentration of the antimicrobial agent is at least  $10^{-6}$  molar.

37. A method according to Claim 21, wherein the yeasts include *Candida albicans*.
38. A method for killing microbes without reducing the killing of microbes by human neutrophils comprising exposing the microbes to an antimicrobial agent selected from the group consisting of one or more peptides including the amino acid sequence KPV or a biologically functional equivalent of any of the foregoing.
39. A method according to Claim 38, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence KPV or a biologically functional equivalent of any of the foregoing.
40. A method according to Claim 39, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence KPV.
41. A method according to Claim 40, wherein the entire amino acid sequence of the antimicrobial agent is KPV.
42. A method according to Claim 38, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence SYSMEHFRWGKPV or a biologically functional equivalent of any of the foregoing.
43. A method according to Claim 42, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence SYSMEHFRWGKPV.

44. A method according to Claim 43, wherein the entire amino acid sequence of the antimicrobial agent is SYSMEHFRWGKPV.

45. A method according to Claim 33, wherein the antimicrobial agent excludes naturally occurring  $\alpha$ -MSH.

46. A method according to Claim 38, wherein the antimicrobial agent is further selected from the group consisting of one or more peptides having an amino acid chain length of up to thirteen.

47. A method according to Claim 38, wherein the antimicrobial agent is N-acetylated and C-amidated.

48. A method according to Claim 38, wherein the concentration of the antimicrobial agent is at least  $10^{-12}$  molar.

49. A method according to Claim 48, wherein the concentration of the antimicrobial agent is at least  $10^{-6}$  molar.

50. A method according to Claim 38, wherein the microbes include *Candida albicans*.

51. A method for treating inflammation in which there is microbial infection without reducing microbial killing comprising exposing the microbes to an antimicrobial agent selected from the group consisting of one or more peptides including the amino acid sequence KPV or a biologically functional equivalent of any of the foregoing.

52. A method according to Claim 51, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence KPV or a biologically functional equivalent of any of the foregoing.

53. A method according to Claim 52, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence KPV.

54. A method according to Claim 53, wherein the entire amino acid sequence of the antimicrobial agent is KPV.

55. A method according to Claim 51, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence SYSMEHFRWGKPV or a biologically functional equivalent of any of the foregoing.

56. A method according to Claim 55, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence SYSMEHFRWGKPV.

57. A method according to Claim 56, wherein the entire amino acid sequence of the antimicrobial agent is SYSMEHFRWGKPV.

58. A method according to Claim 51, wherein the antimicrobial agent excludes naturally occurring  $\alpha$ -MSH.

59. A method according to Claim 51, wherein the antimicrobial agent is further selected from the group consisting of one or more peptides having an amino acid chain length of up to thirteen.
60. A method according to Claim 51, wherein the antimicrobial agent is N-acetylated and C-amidated.
61. A method according to Claim 51, wherein the concentration of the antimicrobial agent is at least  $10^{-12}$  molar.
62. A method according to Claim 61, wherein the concentration of the antimicrobial agent is at least  $10^{-6}$  molar.
63. A method according to Claim 51, wherein the microbes include *Candida albicans*.
64. A method for increasing the accumulation of cAMP in microbes comprising exposing the microbes to an antimicrobial agent selected from the group consisting of one or more peptides including the amino acid sequence KPV or a biologically functional equivalent of any of the foregoing.
65. A method according to Claim 64, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence KPV or a biologically functional equivalent of any of the foregoing.

66. A method according to Claim 65, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence KPV.

67. A method according to Claim 66, wherein the entire amino acid sequence of the antimicrobial agent is KPV.

68. A method according to Claim 64, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence SYSMEHFRWGKPV or a biologically functional equivalent of any of the foregoing.

69. A method according to Claim 68, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence SYSMEHFRWGKPV.

70. A method according to Claim 69, wherein the entire amino acid sequence of the antimicrobial agent is SYSMEHFRWGKPV.

71. A method according to Claim 64, wherein the antimicrobial agent excludes naturally occurring  $\alpha$ -MSH.

72. A method according to Claim 64, wherein the antimicrobial agent is further selected from the group consisting of one or more peptides having an amino acid chain length of up to thirteen.

73. A method according to Claim 64, wherein the antimicrobial agent is N-acetylated and C-amidated.

74. A method according to Claim 64, wherein the concentration of the antimicrobial agent is at least  $10^{-12}$  molar.

75. A method according to Claim 74, wherein the concentration of the antimicrobial agent is at least  $10^{-6}$  molar.

76. A method according to Claim 64, wherein the microbes include *Candida albicans*.

77. An antimicrobial agent selected from the group consisting of one or more peptides including the amino acid sequence KPV, one or more peptides including the amino acid sequence MEHFRWG, or a biologically functional equivalent of any of the foregoing.

78. An antimicrobial agent according to Claim 77, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence KPV or a biologically functional equivalent of any of the foregoing.

79. An antimicrobial agent according to Claim 78, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence KPV.

80. An antimicrobial agent according to Claim 78, wherein the entire amino acid sequence of the antimicrobial agent is KPV.

81. An antimicrobial agent according to Claim 77, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence HFRWGKPV or a biologically functional equivalent of any of the foregoing.

82. An antimicrobial agent according to Claim 81, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence HFRWGKPV.

83. An antimicrobial agent according to Claim 82, wherein the entire amino acid sequence of the antimicrobial agent is HFRWGKPV.

84. An antimicrobial agent according to Claim 77, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence SYSMEHFRWGKPV or a biologically functional equivalent of any of the foregoing.

85. An antimicrobial agent according to Claim 84, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence SYSMEHFRWGKPV.

86. An antimicrobial agent according to Claim 85, wherein the entire amino acid sequence of the antimicrobial agent is SYSMEHFRWGKPV.

87. An antimicrobial agent according to Claim 77, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence MEHFRWG or a biologically functional equivalent of any of the foregoing.

*Repeat* 88. An antimicrobial agent according to Claim 87, wherein the antimicrobial agent is selected from the group consisting of one or more peptides including the amino acid sequence MEHFRWG.

88. An antimicrobial agent according to Claim 88, wherein the entire amino acid sequence of the antimicrobial agent is MEHFRWG.

89. An antimicrobial agent according to Claim 77, wherein the antimicrobial agent excludes naturally occurring  $\alpha$ -MSH.

90. An antimicrobial agent according to Claim 77, wherein the antimicrobial agent is further selected from the group consisting of one or more peptides having an amino acid chain length of up to thirteen.

91. An antimicrobial agent according to Claim 90, wherein the antimicrobial agent is further selected from the group consisting of one or more peptides having an amino acid chain length of up to eight.

92. An antimicrobial agent according to Claim 77, wherein the antimicrobial agent is N-acetylated and C-amidated.

93. An antimicrobial agent according to Claim 77, wherein the concentration of the antimicrobial agent is at least  $10^{-12}$  molar.

94. An antimicrobial agent according to Claim 93, wherein the concentration of the antimicrobial agent is at least  $10^{-6}$  molar.

95. An antimicrobial agent according to Claim 77, wherein the antimicrobial agent is effective against microbes including *Staphylococcus aureus* or *Candida albicans*.